



FIRE & MAN – FRIEND OR FOE?

SUBJECTS: English/Language Arts, Science, Social Studies

GRADES: 4-8

DURATION: One 45-60 minute session

GROUP SIZE: One class of 25 - 30 students

SETTING: Indoors

KEY VOCABULARY: Wildland fire, Native Americans, Europeans, buffalo, prairie, savanna, prescribed burn, journal entry

ANTICIPATORY SET: Fire is a word that can bring a wide range of visions to our imaginations – roasting hot dogs and marshmallows around a bonfire, a cozy campfire with friends or family, a wood burning stove on a cold winter night, or a raging forest or house fire seen on the nightly news. Today we are going to talk about how man has used fire to his benefit.

OBJECTIVES: The students will be able to 1) interpret different cultural viewpoints in regard to fire; 2) describe how man's view of fire has changed over time.

MATERIALS: The four journal/article entries found in this lesson, paper, pen or pencil

BACKGROUND: Just a few days after seeing the eastern coast of what is now Virginia, colonists saw "great smokes of fire" rising from deep within the forest. The year was 1607 and upon investigation these early Europeans found that Native Americans inhabiting the area were burning the native grasses. The colonists believed, at the very best, these people were clearing the land for their "plantation". The worst case scenario was they were using the smoke from the fire to signal their forces and attempt to do battle.

What is noted from this historical account by ecologists is the type of fuel the Indians were burning – grass. Grassland in Virginia (and Kentucky) will quickly succeed to forest unless grazed, mowed or burned. Today numerous researchers agree that manmade and natural disturbances assisted in shaping the patchwork of early ecosystems known as the primeval forest.

The majority of wildland fires in the eastern part of the United States are started by humans and probably have been for thousands of years. Lightning fires (which cause 80% of natural fires) are uncommon in these regions.

Evidence of a long, ancient, anthropogenic fire history is found in the Mammoth Cave area through artifacts found



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in the caves. These artifacts are thought to be two to four thousand years old. The items (torches, slippers, etc.) were manufactured from plants that are presently scarce within the park. When found today, the plants grow to such a small size they could no longer be used for torches or other implements. Plants such as false foxglove, goldenrod and rattlesnake master are restricted to savanna and prairie communities, ecosystems largely dependent on fire.

In Mammoth Cave National Park, all the plants gathered by early Native Americans for food (lambs quarters, sunflower, sumpweed, amaranth, panic grass, maygrass) and for torch material and slippers require more light than is currently available in the forest. Most of these plants require an open savanna or prairie community in order to thrive. This indicates the use of fire by these native people is consistent with practices elsewhere in eastern North America.

The three major groups of Native Americans connected to Kentucky, upon arrival of Europeans, were the Cherokee, Chickasaw and Shawnee. The Shawnee, in particular, claimed the area of Kentucky for a hunting ground and guarded it jealously. This tribe raided the early settlements of Kentucky and did not give up their claims until after the War of 1812.

Although the more ancient groups of Native Americans lived in Kentucky for thousands of years very few of the Cherokee, Chickasaw or Shawnee actually inhabited the area when people of European descent arrived. In the mid-1700s land company representatives gave glowing accounts of the paradise in the west. Following a treaty with the Cherokee and Iroquois in which they ceded to Britain their claims to land in the Ohio Valley, groups such as hunters, explorers, surveyors and land speculators began to push across the mountains into Kentucky. The most noted of the early hunters was Daniel Boone. He later described what he saw:

The buffalo were more frequent than I have ever seen cattle in the settlements, brouzing on the leaves of cane or cropping the herbage of those extensive plains... Sometimes we saw hundreds in droves, and the numbers about the salt springs were amazing. In the forest, the inhabitants of beasts of every kind natural to America, we practiced hunting with great success.

- Adventure of Col. Daniel Boone

Kentucky was admitted to the union as the fifteenth state in 1792 – the first on the western frontier.

Just as in Daniel Boone's journal, the majority of historical descriptions of Kentucky described areas of prairie vegetation. Again, this indicates that vast regions were burned to accommodate the herds of bison and elk. Small towns, such as Elkton and Buffalo Gap, are other reminders. Barren County, with its historical prairie-like landscape, is so named because the Shawnee regularly burned this area to attract large game into the region.

The prairie and oak savanna ecosystems have all but disappeared in Kentucky, along with the bison and elk. Some reports say that 99.99% of these vast regions are gone and are the most threatened ecosystems in the entire state. In order to restore these communities Mammoth Cave National Park is using fire as a tool. These communities have become overgrown, often by non-native species of plants and shrubs, and fire is the only means of restoration. This type of fire is called a prescribed burn, very similar to the methods once used by Native Americans and by farmers throughout Kentucky and other states.

The following selections are fictional journal entries, stories and newspaper articles from Joseph Madison (a young pioneer/adventurer), Chief White Eagle (Native American), Hannah Comer (a young wife moving west with her husband) and Amanda Greer (firefighter with the National Park Service). These entries reflect four points of view about fire. The four entries are from different times in history and therefore reflect different personal views toward the subject. The purpose of the activity is to reveal how cultures affect and are affected by a controversial subject such as fire.

NOTE: Historically, bison (*Bison bison*) were called buffalo and for these entries the term buffalo will be used. True buffalo, such as cape buffalo or water buffalo, are not native to North America.

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PROCEDURE:

1. Divide the class into four groups. Give one journal entry to each group. Ask students in each group to read their entry and summarize, in writing, the information found in the text.
2. Have students research United States and Kentucky history, via the internet or library. Students should investigate the culture of the group represented in their article and determine the views of fire held by that particular group or culture. Ask the students to consider the effect of fire on each group. What effect did the settlers have on the bison and the Native Americans? What was the natural history of the bison and its habitat? How is fire viewed today by someone like the park ranger depicted in the newspaper article or by other people in today's world?
3. Involve the students in a discussion guided by the following questions:
 - What is the main theme of each journal entry? How are they different? What similarities are there in the themes of the four entries?
 - How did each author view the importance of fire? How did the culture of each author influence his or her perceptions? How did fire affect the way of life for each person?
 - Based on your research, do you think the experiences portrayed in the journals/stories/articles accurately portray the people and events of the time? Why or why not? Do you see any biases in their writings?
 - The entries suggest a relationship between the people, the land, sometimes the bison and even the fire. Highlight the sections of the four entries that suggest connections between the four elements. Describe how these elements are interdependent.
 - What lessons about the relationship of people, fire and wildlife could be learned from reading these four journal entries?

CLOSURE: We have looked at a subject that brings out a variety of emotions in people and have seen how man has used something as threatening as fire to actually benefit his life. This lesson has given us an idea of how people lived and worked in the past as well as in current times.

EVALUATION: The teacher will be able to evaluate the students through their participation in class discussions and by reading their written summaries.

EXTENSION: Students could use the same procedures to research a controversial subject that has the potential to affect them and their community.

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JOURNAL ENTRIES

Entry 1. *Excerpts from the journal of Joseph Madison (16 years old)*



April 3, 1769. Tomorrow is the big day! I'm so excited I could just bust wide open. I'll be joinin up with Daniel Boone and a few others and finally takin off for the west. I've had enough of Pennsylvania and enough of school. I can read and write and I know all my numbers. My mom died a few months ago and my dad took off. My older brothers and

sisters are married and settled down with their own families and have plenty of mouths to feed. So I'm takin off to the wilds of Kentucky!

June 1, 1769. Finally arrived in the wilderness. Sure is different than home. Different in a good way though. As my mom would say it's real pretty. There are huge trees in some places and big areas of open grassland and flowers in others. And the wild game is wonderful to see – elk and buffalo great herds of them. One thing for sure I should never be hungry here like I was sometimes in Pennsylvania.

June 16, 1769. Saw my first Indian today. A group of us were out in the woods huntin and all of a sudden we came upon a group of Indians. I don't know who was more scared us or them. They took off in one direction and we took off in the other. When we got back to camp and told Daniel about this he said we were lucky and not to expect them to always go the other way.

October 15, 1769. It's startin to get a little frosty in the mornins now. When I see the elk and buffalo on these cold mornins you can see their breath when they snort. What a sight. These big animals stompin, snortin, rollin around in the dust. I feel real scrawny when I see how big these animals are close up. Sure are bigger than our old Betsy back home.

October 31, 1769. Woke up this mornin and smelled a strong odor of smoke. Not just the camp fires, something

bigger. We all got up and took off from camp to see what was goin on. You wouldn't believe what we saw. A whole group of Indians and they were burnin the grass. What a blaze! Couldn't decide if I should be more scared of the Indians or the fire. Why would they want to burn the grass? Is it a signal to bring in more of their people and attack us? Or are they burnin the grass so they can plant some kind of crop like the farmers back home?

November 13, 1769. I've made a friend of one of the Indians. He's about my age and he has taught me a few of his words and I have taught him some of mine. Daniel said I should be careful. I asked my friend why his people were burnin the grass a few weeks back and he said they do it every few years or I think he meant years. They burn the grass so the trees and other plants don't take over the grassland. If the grass doesn't grow every year then the buffalo and elk will go away and his people will have nothin to eat. He said they only come into the area for a few weeks each year to hunt. Maybe these people are not so dumb after all.



Many years later...

April 3, 1819. I woke up this mornin and realized it has been 50 years since I took my trip west with Daniel Boone and his men. I'm gettin to be an old man, 66 my next birthday. I sometimes still think about those days with Daniel and those adventures and how Kentucky was gettin too crowded for Daniel and some of his men. Moving on to Missouri with him hasn't been so bad but that was enough movin for me. Guess Sarah had something to do with that. She's still real pretty and we have a fine family, seven children and 21 grandchildren so far. Wonder whatever happened to that Indian boy I made friends with. I heard that the Shawnee were finally pushed out of Kentucky and their huntin grounds. Guess it got too crowded for them too. Bet those grasslands are all grown up now. No wonder the buffalo and elk left. Kind of sad when you think about it. My life has turned out pretty good but maybe his didn't. I didn't even know his name.

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Entry 2. *From the stories of Chief White Eagle (Shawnee Chief, 1830)*



Note: Native Americans did not keep journals in the traditional way of people of European decent. Their history was passed orally through stories from one generation to another.

My people have always hunted the buffalo. The buffalo provided everything we needed. Their flesh provided food, their skins clothing and shelter. We wasted nothing because the buffalo was sacred to our people.

One of the happy memories from my childhood was when the boys and men would go out and burn the tall grasses. This was a sight that still lingers in my head. We did not do this every year, only about every third year. Because it was an event that did not happen often made it even more special. The boys in our tribe could hardly sleep the night before a big burn. We would arise on a cool spring or autumn morning and after eating we would leave for the prairie.

The young boys were never allowed to set the fires. Only the quick young braves who had already gone through the ceremonies to become a man were allowed to start the fire. I will never forget how the fire started small but quickly spread faster than a man could run. Another memory is the sound of the wind the fires created and if I close my eyes I can still smell the smoke. All of the young boys like myself looked forward to our time as the ones to start the fires that raced across the prairies.

These fires were set so that the grasses would grow back the next year. Without the fires, trees and small shrubs would grow and after a while the grasses would no longer grow. And if the grasses didn't grow, the buffalo would not return and our people would be hungry and cold.



The days of the great fires have passed. The white man arrived and after a while there were more of them than there were of our people. They brought their cows and built fences. They didn't like the fires. They were afraid the fires would burn their houses and barns. Soon our people were forced to leave the land that we loved so much, the land where once hundreds of buffalo and elk provided all our needs. I only got to light the fires two times before we were moved to the reservation. The days of the great fires and of the great buffalo and elk hunts continue only in our stories. My sons will never light the fires or hunt the buffalo.



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Entry 3. *Excerpts from the journal of Hannah Comer*

April 30, 1792.

My husband John has decided that we are going to leave our home in Virginia and move to Kentucky. John was a young officer in the Revolutionary War and because he was one of the high ranking officers from Virginia he can receive payment for his services in the form of a land grant.

Some officers of his rank received as much as 5,000 acres. And all of the stories he has heard about the abundant wild game has him so excited that he's ready to go claim his land and see what this untamed west is all about. The untamed part is what makes me nervous.

May 10, 1792. Well, we're going to do it. We're moving west. I must say I'm excited but also more than a little scared. John thinks about the wild game and I think about the wild Indians. I also think about leaving my family behind – my mother and father, brothers and sister, aunts and uncles. We have all lived in Virginia all our lives. My oldest brother, George and his wife, Carolyn bought our farm. Their oldest son is getting married soon and he and his new wife will be living in our house and sharing the responsibilities of the tobacco plantation.

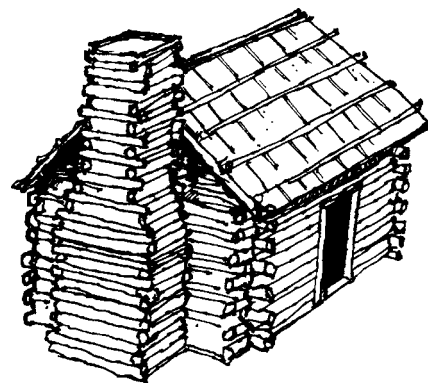
May 15, 1792. We're leaving bright and early in the morning. Everything we own is on pack animals and packed in a couple of small wagons. My brother James is going along with us to help with the wagons and animals. James is not married and says if he really likes what he sees he just might stay in Kentucky. I hope he does, at least there will be one other person besides John that I'll know in this wilderness.

June 17, 1792. Haven't had much time to write in my diary since we started our journey. We are now officially in Kentucky and John has claimed his land. It has been



decided that John, my brother James, and other men from our party will camp on the land until they can finish our cabin and myself and the other women in our group will stay at the fort. John says there is a nice prairie-like area of several hundred acres where our cabin will be built. The buffalo and elk are plentiful in these grassy places so we should always have plenty of meat. Throughout the prairie there are several stands of trees and our cabin will be near one of these so we will have shade in the summer. There's also a stream nearby, supplied by a spring, so we should always have plenty of water. Most of the 5,000 acres that John has claimed (and will share with my brother if he decides to stay) is wooded. John said that even though most of the land is forested by oak and hickory trees there are several of these large grassy prairie areas throughout the land. The people at the fort say that these are areas the Indians have burned for hundreds of years to attract the buffalo. Any kind of talk about Indians makes me really nervous.

July 10, 1792. Our cabin is finished and this is moving day. James has decided he is going to stay in Kentucky. He will live with us until his cabin is finished. He and John plan to go back to Virginia next spring and bring back cows and other farm animals. They will use these large cleared prairies to grow corn and other crops. I may still have time to grow a few things in my vegetable garden. Some of the other women in the area said they would give me some seed but because I am getting them out so late I will probably have to water them real often.



August 1, 1792. We had our first Indian attack a few days ago. I can only now write about it. I guess we knew it was only a matter of time. I will have to say I was scared to death but everything happened so fast that I didn't have time to think about it until it was all over. Now I find it hard to sleep. We were lucky. John and James were

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nearby as well as several other men. They were building a barn so that we would have a place to shelter some of our animals and store their food. It was only a small band of Indians but they looked fierce to me. They were probably hunting and were upset that we are here. Two of our men were wounded, but not badly and some of the Indians were injured as well. I'm sure they'll be back.

August 15, 1792. Life here is hard and sometimes lonely. It would be nice to have another woman to talk to. Now that I'm expecting my first child it would really be nice. At least when the baby is born I will have someone to share my time with, not that there's a lot of spare time with all of the chores. I cook, clean, carry water from the stream, wash clothes for myself, John and James.

September 16, 1792. A lot of things have happened since I last had time to write in my diary. One of the scariest things was a large fire. The grass on the prairie is bone dry at this time of year and catches fire very easily. Late one afternoon, it was almost dark, we began to smell a strong odor of smoke. When looking into the distant hills we began to see flames leaping into the air – the grass was burning and burning quickly. It was headed right toward our house and barn. There was little we could do to stop it and we could see the Indians dancing and yelling like they were having the grandest time. They had set the fire! I had been told that these people burned the grass to attract the buffalo. Didn't they know that this was our land, it was given to us by our government. They no longer had a right to do this. They probably thought they could burn us out and burn the land to bring in the buffalo. Kill two birds with one stone. The fire burned right up to our creek, jumped across it and if our land had not been

ploughed would have burned everything we owned and we would have died either from the fire or the Indians. I must say this was the most frightening experience of my life. I can still smell the smoke and hear those Indians screaming with delight. A few days later I lost my baby. Life sure is hard here in Kentucky.

June 23, 1802. After I lost my first child I just didn't have the heart to write in my diary any longer. I would still send letters back home to my family, but just lost interest in my diary. I picked it up today and realized that it has been almost ten years since I last wrote in this little book. I guess it's time to start again. I want my children and grandchildren to know what it was like for me and John in those early days of living on the frontier of Kentucky. We now have four children – two of each – and they are the joy of our lives. After the Battle of Fallen Timbers in 1794 the Indians were pretty much gone from Kentucky. There were a few skirmishes every now and then but we rarely see the Indians around our lands anymore. In many places the prairies they created have started to grow up with cedars, but we still burn our fields to prepare them for the crops we need to grow. Even though I was scared to death of those Indians and of the fires they set I guess they knew what they were doing when they burned those great prairies. It still works for us today. Our fields are fenced and because the prairies have started to disappear the buffalo are no longer as plentiful as they once were. It's hard for me to admit but I kind of miss those great beasts that once roamed so freely through our property. The sounds they made, when they all started to run at the same time and their snorts on those cold winter mornings. If things continue as they are my grandchildren may never see these great herds of animals.



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Entry 4. Article written for The Greentree Gazette by Amanda Greer, Fire Fighter, National Park Service. The Greentree Gazette is Amanda's hometown newspaper.



Greentree, Kentucky
- November 12, 2001

When I became a park ranger with the National Park Service five years ago I never dreamed I would one day also be a trained firefighter. I have always had a great love for anything connected to the natural world. This is why I have always wanted to work for the National Park Service.

Most wildland firefighters are like myself. They are employed by another state or federal agency and are called out when needed. You can be sent almost anywhere and are usually there for a maximum of 14 days (or two weeks). You may spend several two- week stints during a fire season, especially if the season is extreme. Most people assume that these types of fires are west of the Mississippi River but that is not always true. Florida also has its share of wildland fire and under the right circumstances almost any area is susceptible to these types of fire.

Being a firefighter is a tough, dirty, hot, dangerous job. Some people say it is the closest thing to hand-to-hand combat without firearms or a human opponent. You have to be in excellent physical condition and a minimum requirement is the ability to hike three miles with a 45-pound pack in less than 45 minutes. Sometimes on steep, smoky mountainsides (or foot searing flat ground) firefighters carry chain saws, lengths of firehose, backpacks full of water, and shovels or "Pulaskis" (a combination ax and hoe). This is in addition to their personal safety gear, which includes a shelter you can crawl into if you find yourself surrounded by advancing fire. The

shelter protects you from heat up to 1000 degrees and there is enough oxygen for two minutes. Large fires create their own wind and you have to hold the shelter down. We are trained to break it out in 15 seconds. Thankfully, I have never been placed in a position where I have had to use my shelter but I know other firefighters who have.

A typical day for wildland firefighters begins at approximately 4:45 a.m. when we get out of our tents and get in line for breakfast. The mess hall opens at 5:00 a.m. and if you get there late – no breakfast. After breakfast is a daily briefing beginning at 6:00 a.m. After the briefing we fill our coolers with ice and fluids, pick up our sack lunches, fuel the vehicles, acquire our equipment, and receive our assignments. At 7:00 a.m. sharp we head for the fire line.

Our day usually will run until 7:00 p.m. and occasionally until 9:00 or 10:00 p.m. Firefighters can't just say it's six o'clock, time to go home. When we finally return to camp, (after a jolting 1½ hour drive down the mountain) we are filthy, soot stained, tired and hungry. After washing our hands and face our first stop is the mess hall for dinner, then to the showers. Standing in line for these luxuries and sore feet is all a part of the day. By this time that sleeping bag is looking pretty good and 4:45 a.m. will come all too soon.

I have been doing this for three fire seasons (generally April 15 to July 15). You may wonder why someone like myself would actually want to go back year after year to these hot, smoke-filled, dusty, miserable places. The money is certainly not the reason, although with hazardous duty pay and overtime it's not too bad. There are a number of reasons most of us choose to go back. One is that we actually love what we do and we come to be a very close knit group after being on a fire line for two weeks. We come to depend on each other under all sorts of extreme and dangerous conditions. We function as if our lives depend on it, and they often do. Another great perk of the job is that we are helping people when they most need it. Many of these people are at risk for losing everything. When we leave an area we get waves and thank you signs and offers of food. This inspires you to give a little extra to your job. Anyone who likes to help people couldn't help but love this job.